



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

*Am*

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/892,701	06/28/2001	Michael J. Borg	10007022-1	4684

7590 05/27/2005  
HEWLETT-PACKARD COMPANY  
Intellectual Property Administration  
P.O. Box 272400  
Fort Collins, CO 80527-2400

EXAMINER

STEVENS, ROBERT

ART UNIT PAPER NUMBER

2176

DATE MAILED: 05/27/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

09/892,701

**Applicant(s)**

BORG, MICHAEL J.

**Examiner**

Robert M Stevens

**Art Unit**

2176

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 03 March 2005.  
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-4,6-11,13-17 and 19 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1-4,6-11,13-17 and 19 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.  
10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_.  
5) ☐ Notice of Informal Patent Application (PTO-152)  
6) ☐ Other: \_\_\_\_\_

### DETAILED ACTION

1. This action is responsive to communications: **Application No. 09/892,701** amendment filed 3/3/2005 to the original application filed 6/28/2001 by Borg entitled "System and Method to Automatically Complete Electronic Forms".
2. The Office maintain objections raised in the First Action on the Merits (FAOM) concerning the specification (i.e., Abstract) in view of the amendment.
3. The FAOM rejections of claims 1, 6-8 and 13-19 under 35 USC 102(e) as being anticipated by Light, have been withdrawn as necessitated by amendment.
4. The FAOM rejections of claims 2-4 and 9-11 under 103(a) as being unpatentable over Light in view of Poreh, have been withdrawn as necessitated by amendment.
5. The FAOM rejections of claims 5 and 12 under 103(a) as being unpatentable over Light in view of Poreh and Srihari, have been withdrawn as necessitated by amendment.
6. The FAOM rejection of claim 20 under 103(a) as being unpatentable over Light in view of Srihari, have been withdrawn as necessitated by amendment.

Art Unit: 2176

7. Claims 1-4, 6-11, 13-17 and 19 are pending. Claims 5, 12, 18 and 20 have been cancelled. Claims 1-4, 6-11, 13-17 and 19 stand rejected for the reasons provided below.

### ***Specification***

8. Applicant is reminded of the proper content of an abstract of the disclosure.

A patent abstract is a concise statement of the technical disclosure of the patent and should include that which is new in the art to which the invention pertains. If the patent is of a basic nature, the entire technical disclosure may be new in the art, and the abstract should be directed to the entire disclosure. If the patent is in the nature of an improvement in an old apparatus, process, product, or composition, the abstract should include the technical disclosure of the improvement. In certain patents, particularly those for compounds and compositions, wherein the process for making and/or the use thereof are not obvious, the abstract should set forth a process for making and/or use thereof. If the new technical disclosure involves modifications or alternatives, the abstract should mention by way of example the preferred modification or alternative.

The abstract should not refer to purported merits or speculative applications of the invention and should not compare the invention with the prior art.

Where applicable, the abstract should include the following:

- (1) if a machine or apparatus, its organization and operation;
- (2) if an article, its method of making;
- (3) if a chemical compound, its identity and use;
- (4) if a mixture, its ingredients;
- (5) if a process, the steps.

Extensive mechanical and design details of apparatus should not be given.

9. A new Abstract should be submitted because: the Abstract merely reiterates some of the claims.

An abstract should succinctly summarize the detailed paper that follows. The submitted abstract does not succinctly summarize Applicant's purported invention, and

in fact does not even touch upon the core of Applicant's purported invention which involves an OCR processing of forms. Additionally, there is an excess of unnecessary claim preamble language (method, method comprises, system, computer readable medium, etc. and language that can be summarized as stating "see the above").

### ***Claim Objections***

10. Claim 19 is objected to because of the following informalities: Claim 19 is dependent upon cancelled claim 18. For the purpose of further examination, the Office will treat claim 19 as being dependent upon claim 17. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 103***

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. **Claims 1, 6-8, 13-17 and 19 are rejected under 35 U.S.C. 103(a)** as being unpatentable over Light et al (US Patent No. 6,192,380, filed Mar. 31, 1998 and issued Feb. 20, 2001, hereafter referred to as "Light") in view of Sargur N. Srihari ("Document Image Understanding", Dept. of Computer Science, SUNY Buffalo, IEEE Document No. CH2345-7/86/000/0087, © 1996, pp. 87-96, hereafter "Srihari").

**Regarding independent claim 1, Light discloses:**

*A method for automated form completion for a user of a computer, the method comprising the steps of:*

*identifying one or more fields in a form of a Web page; (col. 3 lines 3-5 and Fig. 3 and col. 2 line 67 – col. 3 line 5)*

*automatically supplying information corresponding to the one or more identified fields without intervention by the user; (Abstract and col. 4 lines 1-14, especially "The Fill-In Unit 330 inserts the data into then space associated with the tag.") and*

*... :*

*... ;*

*... ;*

*... ; and*

*... .*

However, Light does not explicitly disclose:

*... :*

*... ;*

*... ; and*

*wherein the one or more fields are identified by:*

*capturing an image of the Web page;*

*identifying text by performing OCR in the image;*

*identifying the filed entry box(es) by performing edge analyses on the image; and*

*determining coordinates of the identified fields entry box(es).*

Srihari, though, discloses:

*... :*

*... ;*

*... ; and*

*wherein the one or more fields are identified by:*

*capturing an image of the Web page; (p. 87 Abstract, re: digital document image and digitized representation)*

*identifying text by performing OCR in the image; (p. 91, 1<sup>st</sup> paragraph under "6. Text Recognition")*

*identifying the filed entry box(es) by performing edge analyses on the image; (p. 91, particularly the 3rd paragraph under*

Art Unit: 2176

“5. Graphics Processing”, regarding “thinned image of unit width” [i.e., edge]) *and determining coordinates of the identified fields entry box(es).* (p. 91, 1<sup>st</sup> two paragraphs under “5. Graphics Processing”, especially regarding “pixels” [i.e., coordinates])

It would have been obvious to one of ordinary skill in the art at the time of the invention to apply the teachings of Srihari for the benefit of Light, because to do so would have allowed one to determine the role of a document component, such as a text block, as taught by Srihari on p. 87 in the 1<sup>st</sup> paragraph under the heading “Document Understanding Components”. These references were all applicable to the same field of endeavor, i.e., document processing.

**Regarding claim 6**, which is dependent upon claim 1, Light further discloses:

*further comprising the step of prompting the user to accept the automatically supplied information.* (Fig. 5A #550)

**Regarding claim 7**, which is dependent upon claim 1, Light further discloses:

*further comprising the step of enabling the user to enter information for fields unidentified in the form.* (col. 6 lines 35-42 discloses leaving certain fields blank)

**Independent claim 8** is directed to a computer readable medium comprised of software for implementing the method of claim 1. As such, claim 8 is substantially similar to claim 1, and therefore likewise rejected.

**Claims 13-14** are substantially similar to claims 6-7, respectively, and therefore likewise rejected.

**Regarding independent claim 15**, Light discloses:

*A system for automated form completion for a user of a computer comprising:*

*a field module capable of identifying one or more fields in an e-form readable by a Web browser; (col. 3 lines 3-5 and Fig. 3 and col. 2 line 67 – col. 3 line 5)*

*a field completer module capable of automatically supplying information corresponding to the one or more identified fields without intervention by the user; (Abstract and col. 4 lines 1-14, especially "The Fill-In Unit 330 inserts the data into then space associated with the tag.") and*

*a data collector module configured to read the e-form, the data collector module capable of (Fig. 3 #320 and col. 2 line 67 – col. 3 line 5, it being merely a matter of obvious design choice as to the name and processing functions a designer assigns to a processing module)*

*... ;*

*... ;*

*... ; and*

*... .*

However, Light does not explicitly disclose:

*... :*

*... ;*

*... ; and*

*...*

*capturing an image of the e-form;*

*identifying text by performing OCR in the image;*

*identifying the filed entry box(es) by performing edge analyses on the image; and*  
*determining coordinates of the identified fields entry box(es).*

Srihari, though, discloses:

*... :*

*... ;*



... ; and

...

*capturing an image of the Web page; (p. 87 Abstract, re: digital document image and digitized representation)*

*identifying text by performing OCR in the image; (p. 91, 1<sup>st</sup> paragraph under "6. Text Recognition")*

*identifying the filed entry box(es) by performing edge analyses on the image; (p. 91, particularly the 3rd paragraph under "5. Graphics Processing", regarding "thinned image of unit width" [i.e., edge]) and*

*determining coordinates of the identified fields entry box(es). (p. 91, 1<sup>st</sup> two paragraphs under "5. Graphics Processing", especially regarding "pixels" [i.e., coordinates])*

It would have been obvious to one of ordinary skill in the art at the time of the invention to apply the teachings of Srihari for the benefit of Light, because to do so would have allowed one to determine the role of a document component, such as a text block, as taught by Srihari on p. 87 in the 1<sup>st</sup> paragraph under the heading "Document Understanding Components". These references were all applicable to the same field of endeavor, i.e., document processing.

**Regarding claim 16**, which is dependent upon claim 15, Light further discloses:

*wherein the field identifier module (Fig. 3 #315) comprises:*

*a parser (Fig. 3 #350) configured to generate a table of fields; (col. 3 lines 3-5)*

*a spell checker (Fig. 3 #360) configured to store alternative spellings of fields; (col. 3 lines 60-62)*

*a thesaurus (Fig. 3 #360) configured to store synonyms of fields; (col. 3 lines 60-62, re; alternative field name tags) and*

*a comparison algorithm (Fig. 3 #360) connected to the parser, the spell checker and the thesaurus, the comparison algorithm configured to determine the identity of each field based on the respective similarity of each field to one or more fields in the database. (col. 3 lines 60-62)*

**Regarding claim 17**, which is dependent upon claim 16, Light further discloses:

*an information checker (Fig. 3 #320) comprising:*  
*a user interface configured to display an unidentified field*  
(col. 6 lines 35-42 discloses leaving certain fields blank) *and user*  
*selectable options to the user;* (col. 7 lines 11-17 disclose giving a  
user the option to add data to a database)  
*associated logic configured to determine the identity of the*  
*unidentified field in response to a selection;* (col. 7 lines 11-17  
disclose adding new data [unidentified field value] to a database)  
*and*  
*the information checker is further configured to store the*  
*determined identity of the unidentified field to the database.* (col. 7 lines  
15-18, re: store new data in a database)

**Regarding claim 19**, which is dependent upon claim 17, Light further discloses:

*wherein the data collector module is configured to access the*  
*source code of the e-form.* (col. 2 line 67 – col. 3 line 5)

13. **Claims 2-4 and 9-11 are rejected under 35 U.S.C. 103(a)** as being unpatentable over Light et al (US Patent No. 6,192,380, filed Mar. 31, 1998 and issued Feb. 20, 2001, hereafter referred to as "Light") in view of Sargur N. Srihari ("Document Image Understanding", Dept. of Computer Science, SUNY Buffalo, IEEE Document No. CH2345-7/86/000/0087, © 1996, pp. 87-96, hereafter "Srihari") and further in view of Poreh et al. (US Patent No. 6,040,832, filed Aug. 10, 1998 and issued Mar. 21, 2000, relying on a divisional application filed Oct. 10, 1995, hereafter referred to as "Poreh").

**Regarding claim 2**, Light further discloses:

*determining the correct spelling of one or more words associated*  
*with the one or more fields;* (col. 3 lines 62-65, re: "misspellings") *and*

...

However, Light does not explicitly disclose:

*determining a synonym for one or more words associated with the one or more fields.*

Poreh, though, discloses:

*determining a synonym for one or more words associated with the one or more fields. (Fig. 4 #70, teaches use of thesaurus)*

It would have been obvious to one of ordinary skill in the art at the time of the invention to apply the teachings of Poreh for the benefit of Light in view of Srihari, because to do so would allow a user to capture, process and route data entries via a GUI, as taught by Poreh in col. 2 lines 11-17. These references were all applicable to the same field of endeavor, i.e., document processing.

**Regarding claim 3**, which is dependent upon claim 2, Light further discloses:

*determining the identity of the one or more fields based on the respective similarity of each field to a previously stored field. (col. 3 lines 60-62)*

**Regarding claim 4**, which is dependent upon claim 3, Light further discloses:

*reading a source code of the Web page; (col. 2 lines 67 – col. 3 line 5) and  
determining fields based on associated mark-up tags. (col. 3 lines 44-59)*

**Claims 9-11** are substantially similar to claims 2-4, respectively, and therefore likewise rejected.

### ***Response to Arguments***

14. Applicant's arguments filed 12/9/2004 have been fully considered but they are not persuasive.

Applicant's remarks on page 10 of the amendment concerning the Abstract issues raised in the FAOM have been addressed above (in which the Office maintained these FAOM objection).

It is respectfully noted that Applicant's amendment to the claims significantly changes the scope of the claimed invention as a whole. As such, Applicant's arguments (pages 7-10 of the amendment) concerning FAOM rejections of rejections of claims 1, 6-8 and 13-19 under 35 USC 102(e) as being anticipated by Light, claims 2-4 and 9-11 under 103(a) as being unpatentable over Light in view of Poreh, claims 5 and 12 under 103(a) as being unpatentable over Light in view of Poreh and Srihari, and claim 20 under 103(a) as being unpatentable over Light in view of Srihari have been rendered moot.

### ***Conclusion***

15. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

***US Patent Application Publications***  
Janakiraman et al                      US2002/0042823

	<b><i>US Patents</i></b>
Markus et al	6,490,601
Kraft et al	6,829,780

16. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

17. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert M Stevens whose telephone number is (571) 272-4102. The examiner can normally be reached on M-F 6:00 - 2:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph H. Feild can be reached on (571) 272-4090. The current fax phone number for the organization where this application or proceeding is assigned is 703-872-9306. Additionally, the main number for Technology Center 2100 is (571) 272-2100.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Robert M. Stevens  
Reg. No. 47,972  
Art Unit 2176  
Date: May 25, 2005



**JOSEPH FEILD**  
**SUPERVISORY PATENT EXAMINER**

rms